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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/526,547	03/03/2005	Jyri Hamalainen	59643.00583	5269

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EXAMINER	
HERRERA, DIEGO D	
ART UNIT	PAPER NUMBER
2617	

NOTIFICATION DATE	DELIVERY MODE
11/10/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/526,547	HAMALAINEN ET AL.	
	Examiner	Art Unit	
	DIEGO HERRERA	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 April 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

Claims 1, 7, 17, and 18 have been amended.

Response to Arguments

Applicant's arguments filed 4/23/2010 have been fully considered but they are not persuasive. In response to applicant's argument that there is no teaching, suggestion, or motivation to combine the references, the examiner recognizes that obviousness may be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988), *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992), and *KSR International Co. v. Teleflex, Inc.*, 550 U.S. 398, 82 USPQ2d 1385 (2007). In this case, "wherein the transmission parameter controls one or more of the baseband stage, power amplification stages and the antenna such that changing the transmission parameter results in an alteration of a signal diversity of one or more preambles as received by thee base station at the later time, and wherein the signal diversity comprises multipath diversity," the Parsa et al. reference teaches transmission parameter controls of at least one power control information packet with the combination of Shattil teaches that multipath is inherent in OFDM and the system uses RAKE antennas which uses multipath and time diversity constructs.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 4, 7-9,12, and 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parsa et al. (US 6643318 B1), and in view of Shattil (US 20020034191 A1).

Regarding claim 1. a method of initiating a telecommunications uplink from a mobile terminal to a telecommunications network (abstract, title, ¶: 22-26, Shattil teaches uplink between the base station to the mobile terminal), the mobile terminal having a transmission chain including a baseband stage (¶: 19, 265; baseband information is disclosed by Shattil), a power amplification stage (¶: 164, power amplifiers are disclosed Shattil) and an antenna (fig. 8 element 309; Shattil teaches antenna), the method comprising:

transmitting a preamble signal from the mobile terminal at a first time, the preamble signal being transmitted in accordance with a transmission parameter of the mobile terminal (col. 2 lines: 65—col. 3 lines: 5, Parsa et al. teaches preamble signal signatures sent by mobile terminal to base station which corresponds to the spreading code and/or the scrambling code used by the network to define the selected logical channel at the physical layer of the CDMA network);

determining whether a base station has successfully received the preamble signal and if so, establishing an uplink to the base station on the basis of the first transmission parameter (col. 3 lines: 5-10, Parsa et al. teaches determination means wherein the mobile terminal stops transmitting when access preambles has been picked up and detected by the base station); and

in the event it is not determined that a base station has successfully received the preamble signal, changing the transmission parameter, and repeating the transmitting of the preamble signal and the determining whether a base station has successfully received the preamble signal at a time later than the first time (col. 15 lines: 13-32,

Parsa et al. teaches the option when a mobile station does not receive a indication that the base station has received acquisition of the preamble signal it retransmit the access preamble, hence, repeated at a different time a retry to uplink to base station when is determined that base station has not successfully acknowledge the access preamble of the mobile station);

wherein the transmission parameter controls one or more of the baseband stage, power amplification stages and the antenna such that changing the transmission parameter results in an alteration of a signal diversity of one or more preambles as received by the base station at the later time (col. 11 lines: 40-56, col. 15 lines: 13-32, Parsa et al. teaches the option when a mobile station does not receive a indication that the base station has received acquisition of the preamble signal it retransmit the access preamble, hence, repeated at a different time a retry to uplink to base station when is determined that base station has not successfully acknowledge the access preamble of the mobile station by changing parameters as mentioned in Parsa et al.), and However, the reference of Parsa et al. does not discloses wherein the signal diversity comprises multipath diversity, however, it is analogous in the art and taught by Shattil (¶: 4, 77, Shattil teaches that multipath is inherent in OFDM and the system uses RAKE antennas which uses multipath and time diversity constructs). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention of Parsa et al. to specifically include the one of the signal diversity of multipath or time diversity, as taught by Shattil, for the purposes of having a simpler transceiver designs, abstract.

Regarding claim 9. An apparatus, comprising:

a transmission chain including a baseband stage, a power amplification stage (col. 2 lines:53—col. 3 lines: 14, Parsa et al. teaches power levels and maximum number of access preambles) and an antenna (fig. 8 element 309; Parsa et al. teaches antenna); a transmitter configured to transmit a preamble signal in accordance with a transmission parameter of the apparatus mobile terminal at a first time (col. 11 lines: 40-56, col. 15 lines: 13-32, Parsa et al. teaches the option when a mobile station does not receive a indication that the base station has received acquisition of the preamble signal it retransmit the access preamble, hence, repeated at a different time a retry to uplink to base station when is determined that base station has not successfully acknowledge the access preamble of the mobile station by changing parameters as mentioned in Parsa et al.);

a determiner configured to determine whether a base station has successfully received the preamble signal and if so, to establish an uplink to the base station on the basis of the first transmission parameter (col. 11 lines: 40-56, col. 15 lines: 13-32, Parsa et al. teaches the option when a mobile station does not receive a indication that the base station has received acquisition of the preamble signal it retransmit the access preamble, hence, repeated at a different time a retry to uplink to base station when is determined that base station has not successfully acknowledge the access preamble of the mobile station by changing parameters as mentioned in Parsa et al.); and

in the event it is not determined that a base station has successfully received the preamble signal, a changing unit is configured to change the transmission parameter, and repeat the transmission of the preamble signal and the determination of whether

the base station has successfully received the preamble signal at a time later than the first time (col. 11 lines: 40-56, col. 15 lines: 13-32, Parsa et al. teaches the option when a mobile station does not receive a indication that the base station has received acquisition of the preamble signal it retransmit the access preamble, hence, repeated at a different time a retry to uplink to base station when is determined that base station has not successfully acknowledge the access preamble of the mobile station by changing parameters as mentioned in Parsa et al.),

wherein the transmission parameter controls one or more of the baseband stage, power amplification stages and the antenna such that changing the transmission parameter results in an alteration of a signal diversity of one or more preambles as received by the base station at the later time (col. 11 lines: 40-56, col. 15 lines: 13-32, Parsa et al. teaches the option when a mobile station does not receive a indication that the base station has received acquisition of the preamble signal it retransmit the access preamble, hence, repeated at a different time a retry to uplink to base station when is determined that base station has not successfully acknowledge the access preamble of the mobile station by changing parameters as mentioned in Parsa et al.), and

However, the reference of Parsa et al. does not discloses wherein the signal diversity comprises multipath and/or time diversity, however, it is analogous in the art and taught by Shattil (¶: 4, 77, Shattil teaches that multipath is inherent in OFDM and the system uses RAKE antennas which uses multipath and time diversity constructs). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention of Parsa et al. to specifically include the one of the signal diversity of multipath or time

diversity, as taught by Shattil, for the purposes of having a simpler transceiver designs, abstract.

Regarding claim 17. a computer program, embodied on a computer-readable medium, the computer program configured to control a processor to perform a method, the method comprising:

a transmission chain including a baseband stage, a power amplification stage (col. 2 lines:53—col. 3 lines: 14, Parsa et al. teaches power levels and maximum number of access preambles) and an antenna (fig. 8 element 309; Parsa et al. teaches antenna);

a transmitter configured to transmit a preamble signal in accordance with a transmission parameter of the apparatus mobile terminal at a first time (col. 11 lines: 40-56, col. 15 lines: 13-32, Parsa et al. teaches the option when a mobile station does not receive a indication that the base station has received acquisition of the preamble signal it retransmit the access preamble, hence, repeated at a different time a retry to uplink to base station when is determined that base station has not successfully acknowledge the access preamble of the mobile station by changing parameters as mentioned in Parsa et al.);

a determiner configured to determine whether a base station has successfully received the preamble signal and if so, to establish an uplink to the base station on the basis of the first transmission parameter (col. 11 lines: 40-56, col. 15 lines: 13-32, Parsa et al. teaches the option when a mobile station does not receive a indication that the base station has received acquisition of the preamble signal it retransmit the access preamble, hence, repeated at a different time a retry to uplink to base station when is

determined that base station has not successfully acknowledge the access preamble of the mobile station by changing parameters as mentioned in Parsa et al.); and

in the event it is not determined that a base station has successfully received the preamble signal, a changing unit is configured to change the transmission parameter, and repeat the transmission of the preamble signal and the determination of whether the base station has successfully received the preamble signal at a time later than the first time (col. 11 lines: 40-56, col. 15 lines: 13-32, Parsa et al. teaches the option when a mobile station does not receive a indication that the base station has received acquisition of the preamble signal it retransmit the access preamble, hence, repeated at a different time a retry to uplink to base station when is determined that base station has not successfully acknowledge the access preamble of the mobile station by changing parameters as mentioned in Parsa et al.),

wherein the transmission parameter controls one or more of the baseband stage, power amplification stages and the antenna such that changing the transmission parameter results in an alteration of a signal diversity of one or more preambles as received by the base station at the later time (col. 11 lines: 40-56, col. 15 lines: 13-32, Parsa et al. teaches the option when a mobile station does not receive a indication that the base station has received acquisition of the preamble signal it retransmit the access preamble, hence, repeated at a different time a retry to uplink to base station when is determined that base station has not successfully acknowledge the access preamble of the mobile station by changing parameters as mentioned in Parsa et al.), and

However, the reference of Parsa et al. does not discloses wherein the signal diversity comprises multipath and/or time diversity, however, it is analogous in the art and taught by Shattil (¶: 4, 77, Shattil teaches that multipath is inherent in OFDM and the system uses RAKE antennas which uses multipath and time diversity constructs). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention of Parsa et al. to specifically include the one of the signal diversity of multipath or time diversity, as taught by Shattil, for the purposes of having a simpler transceiver designs, abstract.

Regarding claim 18. an apparatus comprising:

a transmission chain including a baseband stage, a power amplification stage (col. 2 lines:53—col. 3 lines: 14, Parsa et al. teaches power levels and maximum number of access preambles) and an antenna (fig. 8 element 309; Parsa et al. teaches antenna);

a transmitter configured to transmit a preamble signal in accordance with a transmission parameter of the apparatus mobile terminal at a first time (col. 11 lines: 40-56, col. 15 lines: 13-32, Parsa et al. teaches the option when a mobile station does not receive a indication that the base station has received acquisition of the preamble signal it retransmit the access preamble, hence, repeated at a different time a retry to uplink to base station when is determined that base station has not successfully acknowledge the access preamble of the mobile station by changing parameters as mentioned in Parsa et al.);

a determiner configured to determine whether a base station has successfully received the preamble signal and if so, to establish an uplink to the base station on the basis of

the first transmission parameter (col. 11 lines: 40-56, col. 15 lines: 13-32, Parsa et al. teaches the option when a mobile station does not receive a indication that the base station has received acquisition of the preamble signal it retransmit the access preamble, hence, repeated at a different time a retry to uplink to base station when is determined that base station has not successfully acknowledge the access preamble of the mobile station by changing parameters as mentioned in Parsa et al.), and

in the event it is not determined that a base station has successfully received the preamble signal, a changing unit is configured to change the transmission parameter, and repeat the transmission of the preamble signal and the determination of whether the base station has successfully received the preamble signal at a time later than the first time (col. 11 lines: 40-56, col. 15 lines: 13-32, Parsa et al. teaches the option when a mobile station does not receive a indication that the base station has received acquisition of the preamble signal it retransmit the access preamble, hence, repeated at a different time a retry to uplink to base station when is determined that base station has not successfully acknowledge the access preamble of the mobile station by changing parameters as mentioned in Parsa et al.)

wherein the transmission parameter controls one or more of the baseband stage, power amplification stages and the antenna such that changing the transmission parameter results in an alteration of a signal diversity of one or more preambles as received by the base station at the later time (col. 11 lines: 40-56, col. 15 lines: 13-32, Parsa et al. teaches the option when a mobile station does not receive a indication that the base station has received acquisition of the preamble signal it retransmit the access

preamble, hence, repeated at a different time a retry to uplink to base station when is determined that base station has not successfully acknowledge the access preamble of the mobile station by changing parameters as mentioned in Parsa et al.), and However, the reference of Parsa et al. does not discloses wherein the signal diversity comprises multipath and/or time diversity, however, it is analogous in the art and taught by Shattil (¶: 4, 77, Shattil teaches that multipath is inherent in OFDM and the system uses RAKE antennas which uses multipath and time diversity constructs). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention of Parsa et al. to specifically include the one of the signal diversity of multipath or time diversity, as taught by Shattil, for the purposes of having a simpler transceiver designs, abstract.

Consider claim 4. The method according to claim 1, the combination discloses wherein the transmission parameter indicates a frequency band, each preamble being transmitted via the frequency band indicated by the current transmission parameter (col. 11 lines: 40-56, col. 15 lines: 13-32, Parsa et al. teaches the option when a mobile station does not receive a indication that the base station has received acquisition of the preamble signal it retransmit the access preamble, hence, repeated at a different time a retry to uplink to base station when is determined that base station has not successfully acknowledge the access preamble of the mobile station by changing parameters as mentioned in Parsa et al.).

Consider claim 7. The method according to claim 1, wherein the uplink is established in accordance with the transmission parameter used when the base station successfully

received the preamble at the first time or at a later time than the first time (col. 11 lines: 40-56, col. 15 lines: 13-32, col. 14 lines: 40—col. 16 lines: 16, Parsa et al. teaches the option when a mobile station does not receive a indication that the base station has received acquisition of the preamble signal it retransmit the access preamble, hence, repeated at a different time a retry to uplink to base station when is determined that base station has not successfully acknowledge the access preamble of the mobile station by changing parameters as mentioned in Parsa et al.; furthermore, the reference teaches the setting up and re-transmission of preamble having counter set to a threshold for failure notice).

Consider claim 8. The method according to claim 1, wherein the transmission parameter includes a power level at which each preamble is transmitted, the power level being increased between at least some sequentially adjacent preamble transmissions (col. 11 lines: 40-56, col. 15 lines: 13-32, Parsa et al. teaches the option when a mobile station does not receive a indication that the base station has received acquisition of the preamble signal it retransmit the access preamble, hence, repeated at a different time a retry to uplink to base station when is determined that base station has not successfully acknowledge the access preamble of the mobile station by changing parameters as mentioned in Parsa et al.).

Consider claim 12. The apparatus according to claim 9, wherein the transmission parameter is configured to indicate a frequency band, each preamble being transmitted via the frequency band indicated by the current transmission parameter (col. 11 lines: 40-56, col. 15 lines: 13-32, Parsa et al. teaches the option when a mobile station does

not receive a indication that the base station has received acquisition of the preamble signal it retransmit the access preamble, hence, repeated at a different time a retry to uplink to base station when is determined that base station has not successfully acknowledge the access preamble of the mobile station by changing parameters as mentioned in Parsa et al.).

Consider claim 15. (Currently Amended) The apparatus according to claim 9, wherein the uplink is established in accordance with the transmission parameter used when the base station successfully received the preamble at the first time or at a later time than the first time (col. 11 lines: 40-56, col. 15 lines: 13-32, col. 14 lines: 40—col. 16 lines: 16, Parsa et al. teaches the option when a mobile station does not receive a indication that the base station has received acquisition of the preamble signal it retransmit the access preamble, hence, repeated at a different time a retry to uplink to base station when is determined that base station has not successfully acknowledge the access preamble of the mobile station by changing parameters as mentioned in Parsa et al.; furthermore, the reference teaches the setting up and re-transmission of preamble having counter set to a threshold for failure notice).

Consider claim 16. The apparatus according to claim 9, wherein the transmission parameter includes a power level at which each preamble is transmitted, the power level being increased between at least some sequentially adjacent preamble transmissions (¶: 17-20, Parsa et al. teaches control for preamble in the CI adaptively).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 2-3, 5-6, 10-11, and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parsa et al. and Shattil (US 20020034191 A1), and in view of Wang et al. (US 7013146 B2).

Consider claim 2. The method according to claim 1, wherein the transmission chain includes at least two antennae, and the transmission parameter determines which of the antennae the preamble is transmitted from (abstract, col. 1 lines: 34-63, Wang et al. teaches MIMO devices that select which antennae is to be used to accomplish link adaptation).

Consider claim 3. The method according to claim 2, wherein the preamble is transmitted from only one of the antennae at a time (abstract, col. 1 lines: 34-63, Wang et al. teaches MIMO devices that select which antennae is to be used to accomplish link adaptation).

Consider claim 5. The method according to claim 1, wherein the transmission chain includes a plurality of antennae in an antenna array (abstract, col. 1 lines: 34-63, Wang et al. teaches MIMO devices that select which antennae is to be used to accomplish uplink adaptation), and directionality of a beam formed by signals transmitted from the array is selected for each preamble transmission based on the transmission parameter (¶: 257, Shattil teaches beam forming techniques).

Consider claim 6. A method according to claim 5, wherein the transmission chain includes a phase shifting means for shifting the phase of the signals supplied to the individual antennae in the antenna array, the phase shifters being controllable on the basis of the transmission parameter (abstract, col. 1 lines: 34-63, Wang et al. teaches MIMO devices that select which antennae is to be used to accomplish uplink adaptation).

Consider claim 10. The apparatus according to claim 9, wherein the transmission

chain includes at least two antennae (col. 1 lines: 48-50, Wang et al. teaches multiple input and multiple output antenna processing), and the transmission parameter is configured to determine determines which of the antennae the preamble is transmitted from (abstract, col. 1 lines: 34-63, Wang et al. teaches MIMO devices that select which antennae is to be used to accomplish link adaptation).

Consider claim 11. The apparatus mobile telecommunications terminal according to claim 10, wherein the preamble is transmitted from only one of the antennae at a time (abstract, col. 1 lines: 34-63, Wang et al. teaches MIMO devices that select which antennae is to be used to accomplish link adaptation).

Consider claim 13. The apparatus according to claim 9, wherein the transmission chain includes a plurality of antennae in an antenna array, and directionality of a beam formed by signals transmitted from the array is selected for each preamble transmission based on the transmission parameter (abstract, col. 1 lines: 34-63, Wang et al. teaches MIMO devices that select which antennae is to be used to accomplish uplink adaptation).

Consider claim 14. The apparatus according to claim 13, wherein the transmission chain includes a phase shifter configured to shift shifting means for shifting the phase of the signals supplied to the individual antennae in the antenna array, the phase shifters being controllable on the basis of the transmission parameter (abstract, col. 1 lines: 34-63, Wang et al. teaches MIMO devices that select which antennae is to be used to accomplish uplink adaptation).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DIEGO HERRERA whose telephone number is (571)272-0907. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Diego Herrera/
Examiner, Art Unit 2617

/LESTER KINCAID/
Supervisory Patent Examiner, Art Unit 2617